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FOLEY AND LARDNER
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EXAMINER

RUTTEN, JAMES D

ART UNIT PAPER NUMBER

2192

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,641

Applicant(s)

KONDO, TAKADO

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/4/04, 2/18/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Acknowledgement is made of Applicant's amendment dated 4 October 2004, responding to the 3 June 2004 Office action provided in the rejection of claims 1-6, wherein all prior claims 1-6 have been canceled, and new claims 7-12 have been added. Claims 7-12 remain pending in the application and have been fully considered by the examiner.

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

3. On page 6 paragraph 2, applicant argues that DRA does not have a separate nonvolatile memory for storage of version or lot information. This is agreed. Applicant further argues that DRA does not disclose a flash writer that stores rewrite control data in the flash writer. However, DRA discloses a flash writer that transmits control data to a CPU. See page 2 line 23

– page 3 line 3. In order to transmit this control data, it must inherently be stored prior to transmission, otherwise there would be nothing to transmit. Thus, this argument is not convincing.

4. On page 6 paragraphs 3 and 4, applicant argues that neither Azuma nor Bass teaches a flash writer that stores rewrite control data in the flash writer. However, neither Azuma nor Bass is relied upon for this feature. Thus, this argument is moot.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 7-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. Claim 7 recites: “*wherein said rewrite of the data is performed by a flash writer...*” Pages 9 and 10 and Figure 4 of the originally filed specification contain a description of the process of rewriting data stored in a flash memory. Page 9 lines 21 – page 10 line 8 describes the process of a flash writer sending instructions and data to a CPU. Page 10 lines 8-11 describes the process of a CPU performing a rewrite of flash memory. The specification does not describe a process of a flash writer directly rewriting flash memory as recited in claim 7.

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For the purpose of further examination, this feature is regarded according to the specification as being performed by a CPU.

8. Claims 8-12 are rejected as being dependent upon a rejected base claim.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 7 recites: "storing, in said microcomputer, a first program for rewriting specified data stored in said flash memory and a first identification data for specifying at least a type of said flash memory" It is not clear if the first program is rewriting "first identification data", or if the "first identification data" is a separate element that is stored apart from the "first program" in the microcomputer. For the purpose of further examination, the "first identification data" will be interpreted as being a separately stored element.

12. Claims 8-12 are rejected as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art of reference "Description of Related Art" section appearing on pages 1-4 of the originally filed specification (hereinafter "DRA") in view of prior art of record Japanese Application Publication 06-332691 to Azuma (hereinafter referred to as "Azuma").

In regard to claim 7, DRA discloses:

A method for rewriting data in a flash memory installed in a microcomputer, comprising the steps of:

storing, in said microcomputer, a first program for rewriting specified data stored in said flash memory See page 2 lines 7-15:

The microcomputer 10A includes, in addition to the flash memory 13 having a user memory area, a mask ROM 14 **storing a specified program for rewriting the data in the flash memory 13**, a serial communication unit 15 for serially communicating the microcomputer 10A with the flash writer 12, a CPU 16 for executing the programs in the flash memory 13 and the mask ROM 14, and a RAM 17 for temporarily storing data therein.

and

receiving, from an external circuit, an instruction for rewriting data stored in said flash memory; See page 2 lines 19-23:

The flash writer 12 transmits/receives information necessary for rewriting the contents stored in the user memory area of the flash memory 13, to/from the microcomputer 10A via the serial communication unit 15.

and

performing a rewrite of the data stored in said flash memory in response to the received instruction using said first program, See page 3 lines 7-10:

The flash writer 12 transmits data for updating the data in the user memory area. The microcomputer 10A rewrites this data into the user memory area.

wherein said rewrite of the data is performed... using rewrite control data stored in said flash writer. See page 2 line 23 – page 3 line 3:

The flash writer 12 makes predetermined operations to set the CPU 16 to a flash programming mode (step S21), and then **transmits parameters including programming and erasing voltages and programming and erasing times (step 522) for the rewriting.**

DRA does not expressly disclose:

storing, in said microcomputer, a first identification data for specifying at least a type of said flash memory; or

wherein said rewrite of the data is performed by a flash writer in accordance with said first identification data.

However, in an analogous environment, Azuma teaches rewriting data based on stored circuit version information in nonvolatile flash memory (Abstract: “A writing controller 4 writes the program for version up selected based on the **circuit version in the flash memory 1...**”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Azuma’s circuit version information in DPA’s flash rewrite control technique. One of ordinary skill would have been motivated to ensure that flash memory that is being rewritten is only rewritten with a new version, and not with an old version.

In regard to claim 8, the above rejection of claim 7 is incorporated. DRA further discloses: *storing a second parameter constituting at least a part of said rewrite control data, See page 3 line 24 – page 4 line 2:*

Instead of the control of setting all the parameters from the flash writer, the mask ROM 13 may store some parameters...

Thus, DRA discloses the storage of multiple parameters. DRA does not expressly disclose *a first parameter corresponding to said first identification data in said microcomputer, or selecting said first parameter or said second parameter based on at least said first identification data, and performing said rewrite in accordance with said selected first or second parameter.* However, Azuma teaches selecting based on a version, or identification data, and performing a rewrite based on the selection. See abstract as cited in the above rejection of claim 1.

In regard to claim 9, the above rejection of claim 8 is incorporated. DRA further discloses: *wherein said second parameter is selected based on a characteristic test of a lot of which said flash memory is a member.* See page 3 lines 14-16. All further limitations have been addressed in the above rejection of claim 8.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over DPA and Azura as applied to claim 8 above, and further in view of U.S. Patent 5,870,520 to Lee et al. (hereinafter "Lee").

In regard to claim 10, the above rejection of claim 8 is incorporated. DRA further discloses updating data in a user memory area. See page 3 line 7-9. DRA does not expressly disclose: *updating said first parameter stored in said microcomputer in accordance with said selected first or second parameter.* However, in an analogous

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environment, Lee teaches that update parameters can be rewritten. See column 4 line 66 – column 5 line 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Lee's updating parameters with Azuma's selection with DRA's parameters. One of ordinary skill would have been motivated to reprogram a flash ROM with new parameters in case the old data becomes corrupted (Lee column 1 lines 26-29).

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over DRA and Azura as applied to claim 7 above, and further in view of prior art of record U.S. Patent 6,496,978 to Ito (hereinafter referred to as "Ito").

In regard to claim 11, the above rejection of claim 7 is incorporated. DRA does not expressly disclose: storing version information of said first program in said microcomputer, and storing version information of said first program in said flash writer for each of types and each of versions of said flash memory, wherein performing said rewrite of the data includes the step of judging whether update of said first program is needed based on said version information of said first program stored in said microcomputer. However, Ito teaches that version information can be stored in numerous devices and compared version information in another device in order to determine if an update is required. See column 12 lines 55-61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ito's multiple program selection in DRA's flash rewrite method. One of ordinary skill would have been

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motivated to execute an appropriate program based on version information to avoid running old versions of code which often contain bugs.

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of DRA, Azuma, and Ito as applied to claim 11 above, and further in view of prior art of record U.S. Patent 5,701,492 to Wadsworth et al. (hereinafter referred to as "Wadsworth").

As per claim 12, the above rejection of claim 11 is incorporated. Further, DRA does not expressly disclose using the nonvolatile memory to store a corrected program. However, in an analogous environment, Wadsworth teaches using nonvolatile memory to store at least a part of a corrected program (column 2 lines 27-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Wadsworth's teaching of program storage in DRA's flash rewrite control system. One of ordinary skill would have been motivated to ensure that the old program is not erased until after correct installation of a new program.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571) 272-3703. The examiner can normally be reached on T-F 6:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr

Chameli C. Das
CHAMELI C. DAS
PRIMARY EXAMINER

5/31/05